

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference HM/5 - 22927	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/EP2004/051516	International filing date (day/month/year) 16/07/2004	(Earliest) Priority Date (day/month/year) 25/07/2003
Applicant CIBA SPECIALTY CHEMICALS HOLDING INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

USE OF SUBSTITUTED 2,4-BIS (ALKYLAMINO) PYRIMIDINES OR -QUINAZOLINES AS ANTIMICROBIALS

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/051516

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61L2/18 A61K31/505 C07D239/48 C07D239/95 C11D3/48
 A01N43/54 A61K8/49 A61Q11/02 A61Q19/00 A61Q17/00
 D06M13/355

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61L A61K C07D C11D A01N A61Q D06M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GHOSH D: "2,4-BIS(ARYLAMINO)-6-METHYL PYRIMIDINES AS ANTIMICROBIAL AGENTS" JOURNAL OF THE INDIAN CHEMICAL SOCIETY, THE INDIAN CHEMICAL SOCIETY, CALCUTTA, IN, vol. 58, no. 5, May 1981 (1981-05), pages 512-513, XP000918018 ISSN: 0019-4522 example I; table 2 ----- -/--	1-10, 12-21

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

24 November 2004

Date of mailing of the international search report

09.02.05

Name and mailing address of the ISA

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Kollmannsberger, M

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/051516

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GHONEIM K M ET AL: "SYNTHESIS AND EVALUATION OF SOME 2-, 4- AND 2,4-DI-SUBSTITUTED-6-METH YLPYRIMIDNE DERIVATIVES FOR ANTIMICROBIAL ACTIVITY" JOURNAL OF THE INDIAN CHEMICAL SOCIETY, THE INDIAN CHEMICAL SOCIETY, CALCUTTA, IN, vol. 63, no. 10, October 1986 (1986-10), pages 914-917, XP000985005 ISSN: 0019-4522 page 914, column 2; examples 2a-e -----	1-10, 12-21
X	BRZOZOWSKI T; DYMEK W: "Synthesis and biological properties of some 2,4-dianilinoquinazoline derivatives" DISSERTATIONES PHARMACEUTICAE ET PHARMACOLOGICAE, vol. 22, no. 2, 1970, pages 117-125, XP0009026266 examples XII,XIII,I,VI,VIII,IX; table 1 table 2 -----	1-10, 12-21
X	DE 24 03 165 A (WACKER CHEMIE GMBH) 31 July 1975 (1975-07-31) claim 1 page 9; example 9 -----	1-10, 12-21
X	DE 37 17 480 A (SHELL AGRAR GMBH & CO KG) 1 December 1988 (1988-12-01) claims -----	1-10, 12-21
Y	GB 935 381 A (WELLCOME FOUND) 28 August 1963 (1963-08-28) claim 10 -----	1-10, 12-21
Y	GOTTASOVA, R; KUBIKOVA, J; CIPAK, L: "Antibacterial effect of some 2,6-disubstituted 4-anilinoquinazolines" FOLIA MICROBIOLOGICA, vol. 43, no. 6, 1998, pages 679-682, XP0009026263 the whole document -----	1-10, 12-21
Y	US 2 674 598 A (KYRIDES LUCAS P ET AL) 6 April 1954 (1954-04-06) claim 1 column 3, line 14 -----	1-10, 12-21
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INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	NEIL V HARRIS: "ANTIFOLATE AND ANTIBACTERIAL ACTIVITIES OF 5-SUBSTITUTED 2,4-DIAMINOQUINAZOLINES" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, vol. 1, no. 33, 1990, pages 434-444, XP002074317 ISSN: 0022-2623 tables III,IV	1-10, 12-21
Y	COATS E A ET AL: "CORRELATION ANALYSIS OF PYRIMIDINE FOLIC ACID ANTAGONISTS AS ANTIBACTERIAL AGENTS .L" EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, EDITIONS SCIENTIFIQUE ELSEVIER, PARIS, FR, vol. 14, no. 3, May 1979 (1979-05), pages 261-270, XP000985014 ISSN: 0223-5234 the whole document	1-10, 12-21

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/051516

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 1-10,18 are partly directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-10, 12-21

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-10, 12-21

Use of compounds (I) as antimicrobials and related personal care compositions

2. claim: 11 (part)

Process for the preparation of compounds (I) starting from dichloropyrimidines

3. claim: 11 (part)

Process for the preparation of compounds (I) starting from amidines and ketoesters

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/051516

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 2403165	A	31-07-1975	DE 2403165 A1	31-07-1975
			AT 339660 B	10-11-1977
			AT 46875 A	15-02-1977
			AU 7749675 A	22-07-1976
			BE 824650 A1	22-07-1975
			CH 596766 A5	15-03-1978
			FR 2258129 A1	18-08-1975
			GB 1488093 A	05-10-1977
			JP 50105835 A	20-08-1975
			NL 7500373 A	25-07-1975
			SE 7500731 A	24-07-1975
			ZA 7500491 A	28-01-1976
DE 3717480	A	01-12-1988	DE 3717480 A1	01-12-1988
GB 935381	A	28-08-1963	CH 389628 A	31-03-1965
US 2674598	A	06-04-1954	NONE	